

# INTERNATIONAL SEARCH REPORT

International Application No

US2004/026850

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 F16D65/54 F16D55/40

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F16D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 887 047 A (HARNISH EUGENE E ET AL) 3 June 1975 (1975-06-03)  column 3, line 1 - line 23 column 4, line 38 - line 48; figures 1,2 -----	1-4,6,7, 9-14,16, 17
A	US 4 171 036 A (PLAAT CORNELIUS L) 16 October 1979 (1979-10-16) cited in the application column 4, line 38 - line 46; figures 1,2 -----	1-18
A	US 5 538 109 A (SWANK JOHN P) 23 July 1996 (1996-07-23) cited in the application the whole document -----  -/--	1-18

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \* & \* document member of the same patent family

Date of the actual completion of the international search

7 December 2004

Date of mailing of the international search report

22/12/2004

Name and mailing address of the ISA

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US2004/026850

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 555 819 A (GOODRICH CO B F) 18 August 1993 (1993-08-18) cited in the application column 4, line 12 - line 44; figures 1-5 -----	1-18

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No  
/US2004/026850

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3887047	A	03-06-1975	CA 1026245 A1 GB 1422502 A	14-02-1978 28-01-1976
US 4171036	A	16-10-1979	NONE	
US 5538109	A	23-07-1996	US 5608967 A	11-03-1997
EP 0555819	A	18-08-1993	US 5219046 A EP 0555819 A1 JP 5340433 A	15-06-1993 18-08-1993 21-12-1993

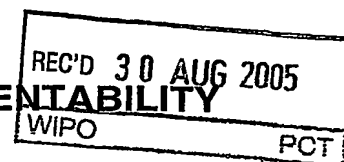
# PATENT COOPERATION TREATY


## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference GRWBP0325WOA		<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416
International application No. PCT/US2004/026850		International filing date (day/month/year) 18.08.2004	Priority date (day/month/year) 18.08.2003	
International Patent Classification (IPC) or national classification and IPC F16D65/54, F16D55/40				
Applicant GOODRICH CORPORATION et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input checked="" type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand  20.06.2005		Date of completion of this report  26.08.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer  Hernandez-Gallegos,  Telephone No. +49 89 2399-8087		



**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/US2004/026850

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**Box No. I Basis of the report**

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1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

**Description, Pages**

1-9 as originally filed

**Claims, Numbers**

1-18 as originally filed

**Drawings, Sheets**

1/3-3/3 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages ..
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
  - ☐ the claims, Nos.
  - ☐ the drawings, sheets/figs
  - ☐ the sequence listing (*specify*):
  - ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
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International application No.  
PCT/US2004/026850

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	5,8,15,18
	No: Claims	1-4,6,7,9-14,16,17
Inventive step (IS)	Yes: Claims	
	No: Claims	1-18
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

**2. Citations and explanations (Rule 70.7):**

**see separate sheet**

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**Box No. VIII Certain observations on the international application**

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The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**see separate sheet**

**Section V**

Reference will be made to the following documents:

- D1: US-A-3 887 047 (HARNISH EUGENE E ET AL) 3 June 1975 (1975-06-03)
- D2: US-A-4 171 036 (PLAAT CORNELIUS L) 16 October 1979 (1979-10-16)
- D3: US-A-5 538 109 (SWANK JOHN P) 23 July 1996 (1996-07-23)
- D4: EP-A-0 555 819 (GOODRICH CO B F) 18 August 1993 (1993-08-18)

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1, and insofar as this claim can be understood (see Guidelines IV-III-4.8), this document shows the following features thereof (the references in parentheses applying to this document):

An adjuster assembly (54) for adjusting the release of clearance between selectively engageable friction parts to compensate for wear in such parts, comprising a continuous tube (58) and an expansion member (62, 72) together having a combined length controlling the release clearance of the selectively engageable friction parts, the expansion member (62, 72) having an expansion device (72) frictionally engaging the interior of the continuous tube (58) to effect progressive circumferential expansion of the continuous tube when the expansion device (72) is axially drawn through the continuous tube (58) to compensate for wear of the friction parts during actuation and release of said selectively engageable parts, and the continuous tube (58) having an end portion (78) processed differently from the balance of the continuous tube (58) for extending the usable portion of the continuous tube (58).

Thus, all the technical features of claim 1 are known from one single document.

The applicant's letter of 20.06.2005 has been considered. Nevertheless, according to the application on page 8, lines 15 to 21, what allows the extension of the usable portion of the continuous tube is the increase in the resistance to travel of the ball at the end portion of the tube. This increase in resistance is achieved merely by processing the end portion differently. In document D1 the end portion of the continuous tube is processed differently and increases the resistance to travel of the ball. Therefore D1 destroys the novelty of claim 1.

The features of dependent claims 2 (see Section VIII below) to 4, 6 and 7 are also known from the same document (58; column 3, lines 19 to 23).

Therefore claims 1 to 4, 6 and 7 are not new (Art. 33(2) PCT).

The shape of the end portion of the continuous tube according to claims 5 and 8 appears to fall within the customary practice of a person skilled in the art.

Therefore claims 5 and 8 appear not to add anything inventive to claims 1 to 4, and 6 to 7, respectively (Art. 33(3) PCT).

Claims 9 to 18 contain in essence the same technical features as claims 1 to 8, and therefore the objections made above concerning novelty or inventive step also apply to these claims.

#### **Section VIII**

1. Although claims 1, and 10 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness and as such do not meet the requirements of Article 6 PCT.

2. Claims 2, and 12 are unclear (Article 6 PCT) because they do not contain any concrete technical features.